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For two-letter codes and other abbreviations, refer to the "Guidance Notes on Codes and Abbreviations" appearing at the beginning of each regular issue of the PCT Gazette.

(54) Title: IMMUNOGENIC COMPOSITIONS COMPRISING A XENOGENIC PROSTATE PROTEIN P501S

(57) Abstract: The present invention relates to pharmaceutical/immunogenic compositions and methods for inducing an immune response against tumour-related antigens. More specifically, the invention relates to non-human prostate-specific antigens, more precisely to the non-human prostate-specific P501S, which can be used as xenogeneic antigen in prostate cancer vaccine therapy and as diagnostic agents for prostate tumours in humans, to immunogenic compositions containing them, to methods of manufacture of such compositions and to their use in medicine. Methods for formulating vaccines for immunotherapeutically treating P501S-expressing prostate tumors, prostatic hyperplasia, and prostate intraepithelial neoplasia (PIN) are also provided.

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INTERNATIONAL SEARCH REPORT

Inter Application No
PCT/03/06095

A. CLASSIFICATION OF SUBJECT MATTER

IPC 7 A61K39/39 A61K38/17 A61P35/00 C07K14/47 C07K14/705
C12N15/63 C12N15/12 C12N5/10

According to International Patent Classification (IPC) or to both national classification and IPC

B. FIELDS SEARCHED

Minimum documentation searched (classification system followed by classification symbols)

IPC 7 A61K

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched

Electronic data base consulted during the international search (name of data base and, where practical, search terms used)

EPO-Internal, BIOSIS, EMBL, SEQUENCE SEARCH, WPI Data, EMBASE, MEDLINE, PAJ

C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category °	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
Y	WO 00 04149 A (CORIXA CORP) 27 January 2000 (2000-01-27)	1-27
X	page 63; examples 1,8 ---	1
Y	WO 98 46769 A (SHAPERO MICHAEL H ;DENDREON CORP (US); LAUS REINER (US); RUEGG CUR) 22 October 1998 (1998-10-22) page 2 ---	1-27
Y	WO 01 81577 A (SCHERING AG ;SCHNEIDER DOUGLAS W (US); STEINBRECHER RENATE (US); L) 1 November 2001 (2001-11-01) page 34, paragraph 2 ---	1-27
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☒ Further documents are listed in the continuation of box C.

☒ Patent family members are listed in annex.

° Special categories of cited documents :

- "A" document defining the general state of the art which is not considered to be of particular relevance
- "E" earlier document but published on or after the international filing date
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- "X" document of particular relevance; the claimed invention cannot be considered novel or cannot be considered to involve an inventive step when the document is taken alone
- "Y" document of particular relevance; the claimed invention cannot be considered to involve an inventive step when the document is combined with one or more other such documents, such combination being obvious to a person skilled in the art.
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 Intern Application No
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C.(Continuation) DOCUMENTS CONSIDERED TO BE RELEVANT

Category *	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
Y	<p>XU JIANGCHUN ET AL: "Identification and characterization of prostein, a novel prostate-specific protein" CANCER RESEARCH, vol. 61, no. 4, 15 February 2001 (2001-02-15), pages 1563-1568, XP002262454 ISSN: 0008-5472 figure 1</p>	1-27
Y	<p>FONG L ET AL: "INDUCTION OF TISSUE-SPECIFIC AUTOIMMUNE PROSTATITIS WITH PROSTATIC ACID PHOSPHATASE IMMUNIZATION" JOURNAL OF IMMUNOLOGY, THE WILLIAMS AND WILKINS CO. BALTIMORE, US, vol. 159, no. 7, 1 October 1997 (1997-10-01), pages 3113-3117, XP002068783 ISSN: 0022-1767 page 3117</p>	1-27
Y	<p>HODGE J W ET AL: "A RECOMBINANT VACCINIA VIRUS EXPRESSING HUMAN PROSTATE-SPECIFIC ANTIGEN (PSA): SAFETY AND IMMUNOGENICITY IN A NON-HUMAN PRIMATE" INTERNATIONAL JOURNAL OF CANCER, NEW YORK, NY, US, vol. 63, no. 2, 9 October 1995 (1995-10-09), pages 231-237, XP000604553 ISSN: 0020-7136 abstract</p>	1-27
P,X	<p>DATABASE EBI 'Online! EMBL; 1 October 2002 (2002-10-01) FANTOM CONSORTIUM: "hypothetical protein - (Prostein homolog)" retrieved from HTTP://WWW.EBI.AC.UK Database accession no. Q8K0H7 XP002262455 abstract & OKAZAKI ET AL: "Analysis of the mouse transcriptome based on functional annotation of 60,770 full-length cDNAs" NATURE , vol. 420, no. 6915, 5 December 2002 (2002-12-05), pages 563-573, XP002252038 page 8</p>	9-13

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INTERNATIONAL SEARCH REPORT

Inter Application No
PCT/ 93/06095

C.(Continuation) DOCUMENTS CONSIDERED TO BE RELEVANT

Category °	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
A	<p>NAFTZGER C ET AL: "Immune response to a differentiation antigen induced by altered antigen: A study of tumor rejection and autoimmunity"</p> <p>PROCEEDINGS OF THE NATIONAL ACADEMY OF SCIENCES OF USA, NATIONAL ACADEMY OF SCIENCE. WASHINGTON, US, vol. 93, no. 25, 1996, pages 14809-14814, XP002188976</p> <p>ISSN: 0027-8424</p> <p>the whole document</p> <p>----</p>	1-27
A	<p>WO 01 25273 A (CORIXA CORP ; REED STEVEN G (US); XU JIANGCHUN (US); CHEEVER MARTIN)</p> <p>12 April 2001 (2001-04-12)</p> <p>the whole document</p> <p>----</p>	1-27
A	<p>WO 99 46992 A (GREGORY RICHARD J ; GENZYME CORP (US); KAPLAN JOHANNE (US))</p> <p>23 September 1999 (1999-09-23)</p> <p>the whole document</p> <p>-----</p>	5

INTERNATIONAL SEARCH REPORT

Ir

Application No.
PCT/EP 03/06095**Box I Observations where certain claims were found unsearchable (Continuation of item 1 of first sheet)**

This International Search Report has not been established in respect of certain claims under Article 17(2)(a) for the following reasons:

1. ☒ Claims Nos.:
because they relate to subject matter not required to be searched by this Authority, namely:

Although claims 23-27 are directed to a method of treatment of the human/animal body, the search has been carried out and based on the alleged effects of the compound/composition.
2. ☐ Claims Nos.:
because they relate to parts of the International Application that do not comply with the prescribed requirements to such an extent that no meaningful International Search can be carried out, specifically:
3. ☐ Claims Nos.:
because they are dependent claims and are not drafted in accordance with the second and third sentences of Rule 6.4(a).

Box II Observations where unity of invention is lacking (Continuation of item 2 of first sheet)

This International Searching Authority found multiple inventions in this international application, as follows:

1. ☐ As all required additional search fees were timely paid by the applicant, this International Search Report covers all searchable claims.
2. ☐ As all searchable claims could be searched without effort justifying an additional fee, this Authority did not invite payment of any additional fee.
3. ☐ As only some of the required additional search fees were timely paid by the applicant, this International Search Report covers only those claims for which fees were paid, specifically claims Nos.:
4. ☐ No required additional search fees were timely paid by the applicant. Consequently, this International Search Report is restricted to the invention first mentioned in the claims; it is covered by claims Nos.:

Remark on Protest

- ☐ The additional search fees were accompanied by the applicant's protest.
- ☐ No protest accompanied the payment of additional search fees.

INTERNATIONAL SEARCH REPORT

Information on patent family members

Intern Application No

PCT/3/06095

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